LONG ISLAND
99ER USERS GROUP

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OUR EIGHT YEAR
LONG ISLAND SOUND

OUR ADVENTURES AT FEST WEST.
By FRANK BUBENIK, JR.

My wife, Joan and I boarded United's flight #7, JFK to Los Angeles, First Class on February 15th. On arrival in LA, we rented a car and drove to the Ramada Maingate in Anaheim, Ca. The hotel was located 38 miles from LAX airport. Our room on the fifth floor was ready. The view from our balcony was of Disneyland's Space Mountain and the monorails. Friday night I watched the vendors move in, and met some of the Orange CO and Pomona Valley staff that was running the Fest.

On Saturday, February 16th, 9 AM, I was on line to buy my ticket to the show, #112. There were two rooms containing fifteen vendors and three user groups. A third room was used for speakers/workshops.

The following vendors were present: COMPRODINE, F-W SALES, REGENA, NOTUNG,T+J, BILL GUSKILL, BUD MILLS, KEN HAMAI, TEX-COMP,MS EXPRESS, BEERY MILLER, BILL CHAVANNE, BARRY TRAVER, RAVE 99 AND ASGARD. There were three user groups, LA99ERS, SW99ERS, AND UGOC.

This was the first time I met REGENA. She is a great lady. She programs on 5 different computers. Mr. Price of TEX-COMP received an award for sticking to the TI99/4A.

There were seven speakers on Saturday and four on Sunday. Ken Hamai discussed the care and feeding of disk drives; Ken Gilliland demo'd programs from Notung; Regena showed some of her programs; Roger Merrit showed his line of software; John McDevitt showed of his new PE BOX.

The show and it's sponsor staff were great. I'd call FEST-WEST, "THE GREATEST LITTLE TI SHOW". From what I heard it was attended by 200+.

My wife and I became tourest for the rest of the week. We went to DISNEYLAND, KNOTTS BERRY FARM, UNIVERSAL STUDIOS, QUEEN MARY, SPRUCE GOOSE, etc. FRIDAY, we flew to Tucson, AZ to my sister's. This week we visited BIOSPHERE 2, COLOSSAL CAVE and a couple of Tucson's Desert Parks. Guess what? At some time I was bitten by some bug. By Friday, I was sick. We flew back to NY. Saturday, I had a 105 fever, chills, and my leg blew up with Cellulitis. Tuesday the doctor put me in the hospital. Needless to say I missed THE FAMILY COMPUTER SHOW in Roselle Park, NJ on SATURDAY. I got out of the hospital Sunday.

I plan to take a trip to BOSTON for their TI-FAIRE on April 6th, 1991. If nothing else goes wrong. KEEP TI-ING. FJB.

L.I. 99'ER NEWSLETTER

The Newsletter of the Long Island 99'er Users Group

VOL 1 NO | Published Monthy | APRIL, 1983

L.I. 99'er NEWSLETTER MAKES ITS DEBUT!

This is the first issue of the Long Island 99'er Users Group Newsletter. This publication is designed to bring all group members closer through monthly contact. Future issues of the Newsletter will offer articles, ideas, listings, letters, etc from the entire membership. If you ever have any ideas or suggestions (or better yet, would like to help with the newsletter), simply get in touch with a member of the newsletter committee or drop a note to Editor, LI 99'er Newsletter, Box 121, Brightwaters, NY 11718. Hope to hear from you soon!

HOW IT ALL BEGAN...

According to Texas Instruments, 9000 99/4A home computers were purchased by Long Islanders prior to December 25, 1982. We all have at least one thing in common -- a serious interest in a unique and interesting device.

With this in mind, Sy Siegel and Bob Vanson, a couple of TI uders, decided it was time to meet other owners and share interests, programs and knowledge. The two ran an ad in Newsday, inviting TI owners to unite for the purpose of forming a Users Group. The response was overwhelming. A questionnaire was sent to each respondent, followed shortly by a notice announcing our first meeting.

A steering committee was formed to help get the Users Group rolling. After a lengthy planning session, the agenda for the first meeting was prepared. The first meeting was held on the rain-soaked evening of March 11, 1983, with approximately 200 people in attendance.

On March 25, the steering committee again gathered for the purpose of preparing for the second meeting to be held April 8, 1983. Although getting this group started will be a slow and methodical process, we are moving along at a good pace.

It is our sincerest hope to satisfy some of the needs of as many users of the TI 99/4A and 99/4 computers as possible through this organization.

SOMETHING FOR EVERONE...

No two users of the TI computer use it for exactly the same reasons. There are virtually thousands of applications for a computer with the TI's capabilities. Being fully aware of this, the group steering committee has devided the group into 11 subgroups, each of which specializes in a specific type of computer application. Following is a list of the various subgroups as well as a brief description of what each is designed to do.

THE LI 99'ER USERS GROUP IS NON-PROFIT AND TOTALLY UNAFFILIATED WITH T.I.

* by JACK SUGHRUE, Box 459, East Douglas, MA 01516 *

#13

the VCR CONNECTION

I think one of the most exciting things to happen in our 99 world is the advent of tutorial and conference videos.

Almost everyone has a VCR, the ownership of which can now open new worlds to 99 and Geneve users. Now that VCRs are coming down in price, more and more groups and individuals are using this tool to enhance their computer activities and share their computer knowledge.

The unquestioned master of this new genre is Dr. Charles Good of the Lima, Ohio, group. Videos have been around for some time and made their first TI existence about five or six years ago at the Chicago Fair. Some of the big-wiggies were interviewed and some screens were shown of different pieces of software. This amateur tape circulated for a year or so around lots of user groups. We (then still in the millions, it seemed) watched transfixed as new and exciting things were explained and shown to us.

Then drought.

Well, even though there were some other videos around here andthere, the drought really ended when Charlie took up the cause with a vengeance. Not only does the Lima group make a monthly tape of the demos of their meetings, but they have amassed a vast TI tape library. I have on my desk (all from Lima) the following: NEVER RELEASED OFFICIAL TI MODULES, TI MULTI-USER GROUP CONFERENCE 1988, CONFERENCE 1989 (2 tapes), CONFERENCE 1990 (3 tapes), MBX REQUIRED GAMES, FUNNELWEB v4.2 DEMO, and DON ALEXANDER'S GENEVE SOFTWARE DEMO. These 10 tapes run about 50 hours! They are filled with all sorts of people demonstrating (or discussing or teaching) all sorts of TI things. I'll list a few.

Karl Romstedt - friendly general loader and label printing software in XB with assembly routines; Harold Hoyt - useful applications of Steve Karesek's SUPER BASIC; Irwin Hott - using ALSAVE to imbed assembly code with an XB program; Bill Hudson - an assembly language prescan for XB; Multiplan Tutorial - presented by Great Lakes Computer Group; PLUS! - demonstrated by Jack Sughrue; Geneve - demonstrated by Edu Comp; Horizon Ramdisk - discussed by Bud Mills; Home Control 99 - demonstrated by Paul Wheeler; The Future of User Groups - discussion led by Charles Good and Dave Szippl of the Lima Group; A Blind Person Using the TI - demonstrated by Irwin Hott; NUTS & BOLTS - demonstrated by Jim Peterson; GENE III - demonstrated by Dick Berry; Output to a VCR - shown by John Perkins; 1000 WORDS - author Norman Rokke demonstrates this Artist/text conversion file; Barry Traver - contents of Genial Traveler and linking XB to assembly via CALL LINK; Chris Bobbitt - recent and future releases from Asgard; Andy Frueh - music programming on the 4a; Ron Markus - the DIJIT AVPC 80-column card; Jim Horn - services on COMPUSERVE; Martin Smoley - TI BASE tutorial; Paul Scheidemantle - converting from one Artist format to another and tips and tricks; Steve Karasek - SUPERBASIC 2.0; Karl Romstedt - Panorama, a new artist program; Milo Tsukroff - MX-DOS v3.0 an icon/joystick based program loader with disk management features; Beery Miller - future software for the Geneve; Jim Peterson - using Don Shorock's Kana Filer that speaks and writes (with TEII)

Japanese and drills vocabulary; Bruce Harrison - secrets of assembly language programming to make TI music; Gary Bowser - Rambo review module library box; Gary Taylor - demonstration of TI's Compact Computer 40, TI's Hex Bux peripherals, and Mechatronics Hex Bus Drive; and lots more.

This should give you a good idea of the kinds of things available each May just from the annual Lima Fair (called "T.I. Multi User Group Conference," for some unknown reason). Each of these six-hour tapes use cameras on the tutor while cutting into the screen electronically when something is being shown. These tapes get better and better each year, and the editing techniques are superb. Although I haven't been able to attend the last two years, I felt I got a big part of the fair sent to me. I know a lot of other homebound TI acquaintances feel the same. It's no real substitute for being at the fair, of course, but it's a great second best. The TI experts are at your beck and call in your home any time you want them.

In addition to all these fair tapes, there are numerous "single theme" jobs also available. Don Alexander of Macon, Georgia, for example, does a fine job with the Geneve. I think this one is better for someone who has used the Geneve for awhile, though. I hope someone eventually does a truly step-by-step basic tutorial of the Geneve, maybe even a full six hours. It is sorely needed.

Charlie has also done theme tapes, such as MBX (where he steps through all the MBX modules) and UNRELEASED (where he plays and discusses all the delightful unreleased TI modules). I found both these tapes fascinating, particularly the UNRELEASED, as I could load them onto my SUPERCART or my GENEVE. Charlie's FUNNELWEB 4.2 DEMO is a classic. The viewer is taken through every step of the FWB configuration process that (for some strange reason) frightened so many people. Though the tape is similar to Charlie's tutorials in the BITS, BYTES & PIXELS newsletter he edits for Lima, it is far more extensive and much clearer, as you can see and hear everything being done live. I can't imagine anyone not being able to perform FWB magic after viewing this tape.

To get more information about these tapes (and/or join the Lima Group by mail which I would HIGHLY recommend), contact Charles Good, PO Box 647, Venedocia, OH 45894.

ANOTHER GOLDEN GOODIE

There is another great video now available to TI owners: the full-length LOGO video done by Eunice Spooner (RFD 1, Box 3720, Webb Road, Waterville, ME 04901). It is wonderful! It also comes with a disk full of lots of the items she demos and a hardcopy listing of the items and footage for easy tape locations.

Eunice is a certified elementary teacher and it is obvious on this tape. She's teriffic: kind, patient, step-by-step logical, no panic; and she makes everything seem easy and fun. Which it is, if you do the things she suggests.

I always liked LOGO. Then I put it away for a long time. After viewing this tape and trying her programs, I discovered I ♥ LOGO.

If you own LOGO, get this package instantly. At $10 it is a total steal. And it is used as a fundraiser to support the only ALL KIDS TI USER GROUP IN THE WORLD! If you don't own LOGO, buy it instantly. (It's on sale everywhere CHEAP! I paid $119 for my first and recently bought an unboxed one for $15.) But, new or used, pick one up for this video/disk set alone. You'll rediscover the joys of computing and the real fun (and learning, which is why it is fun) of your remarkable 4a. Don't delay.

(If you use NEW-AGE/99 please put me on your exchange list.)

A FORTH IDEA by Val Mehling

Fun With Fractals, Part II

Before I get started, there is one other point that should be covered. Writing about programming pretty much demands that the Source Code be included with the article. I have written one series that required the reader to have a copy of the disk, but I really don't like to do that and will try to avoid it in the future. The problem, of course, is that there is a very limited amount of room in a newsletter. Listings should be neat and readable. Well, we just don't have the room so I'm afraid you will have to settle for scrunched. If anyone has a better idea, please let me know. I can be reached through the LITI 99ers or Delphi (VALM).

Even though I am concentrating on fractals, much of what I've worked out should be useful for other kinds of graphics applications. The System Setup screens at the end of this article, for example, have a number of useful plotting tools and a method of incorporating normal text on your Bit Map display. This method 'borrows' the FORTH disk buffer so you must be careful during development. After exiting Bit Map Mode, and before Editing, use EMPTY-BUFFERS.

One very important Word you will also find is F_IN, a Word which can save you a lot of grief. First, it does not use INTERPRET. If you intend to BSAVE any code, avoid the use of that Word at all cost. Second, if you want to see your 99/4A go Out To Lunch in a hurry, ask it to eVALuate nothing into a F.P. number. F_IN checks for this and avoids the problem nicely. As long as F_IN is there, I also use it for entering Single numbers and just use F->S for the conversion.

In order to save as much space as possible, if the function of a FORTH Word is obvious I may not bother explaining it. The Word STEP will move the cursor one step in whatever direction is pointed to by DEGree. SET_PNT makes sure the point is within the limits of the display area and PUT_DOT may then be called to plot/erase that point, depending on the setting of DMODE (see manual). If you are going to move some distance in one direction you can get ther a lot faster by using TREK. Take a look at PLOT to see what I mean. First SET_PNT1 is called to store the cursor's position, then TREK is used to move the cursor, SET_PNT2 stores the new location and then DO_LINE retreives these values and calls LINE.

The Word ?STOP should be in all loops. It provides a simple but very handy escape route should you want to abort a loop for any reason. Now have a look at INIT_AL. The CONstant ABC has been set to the address where the character patterns will be stored. This location has NOT BEEN ALLOCATED for variable storage. As far as FORTH is concerned this is a disk buffer! Use EMPTY-BUFFERS before EDITing. The Word +ROW, and the three that follow, are used to position the text output with wrap-around active in all directions. Store your 'text' in PAD, the text length on the Stack and call DISP to print it out just as if you were in The TEXT Mode. SCALE makes use of these words to put a Scale on the display. This will be very important later.

Next month we'll get into actually running the Population Equation and discuss some very important developments in its use. Later on I'll show you how to grow a binary tree and then I'll have to what other intersting ideas I can find in Mr. Stevens Pascal book.

Until next time remember, be kind to our planet- it's the only one we have, be well and MTFBWY. V.M.

```
    ( SYSTEM SETUP ) : TOP ; : CON CONSTANT ; : VAR VARIABLE ; RANDOMIZE
    : T_MODE TEXT 31 7 8 SYSTEM ; : AT GOTOXY ;
    : FREE SP@ HERE - 1024 /MOD ." SPACE " .  ." K " .  ." BYTES" ;
    0 CON V1 ( LABEL VECTOR ) 0 VAR CNT 0 VAR CAN 12 ALLOT
    : F_IN PAD !" 0..............." 12 CNT ! CAN 12 EXPECT 12 0 DO CAN  I
+  C@ 0= IF I CNT ! LEAVE ENDIF LOOP CNT @ 0= IF >F 0 ELSE CAN PAD 1+ CNT
@ CMOVE VAL FAC> ENDIF ;
    ( FRACTAL/GRAPHICS SETUP ) 191 CON MAX_Y 255 CON MAX_X 96 CON MID_Y
    128 CON MID_X 0 VAR PNT_X 0 VAR PNT_Y 0 VAR F_HLD 6 ALLOT
    0 VAR REAL_X 6 ALLOT 0 VAR REAL_Y 6 ALLOT 0 VAR DEG 6 ALLOT
    0 VAR RAD 6 ALLOT
    : FMOD DUP IF 1 0 DO FOVER FOVER F> IF FDUP F_HLD F! F-  F_HLD  F@  0
ELSE FDROP 1 ENDIF +LOOP ENDIF ;
    : >RAD DEG F@ >F .017453292 F* RAD F! ;
    : >DEG RAD F@ >F 57.29577951 F* DEG F! ;
    : TURN S->F DEG F@ F+ >F 360 FMOD DEG F! ;
    : STEP >RAD RAD F@ COS REAL_X F@ F+ REAL_X F! RAD F@ SIN REAL_Y F@ F+
REAL_Y F! ;
    : SET_PNT REAL_X F@ F->S MAX_X MOD PNT_X ! REAL_Y F@ F->S  MAX_Y  MOD
PNT_Y ! ;
    0 VAR PNT_X1 0 VAR PNT_X2 0 VAR PNT_Y1 0 VAR PNT_Y2 0 VAR DIS_CON
    0 VAR DIS_VAR 0 VAR CYCLE 0 VAR LVL 0 VAR Y_LIM 6 ALLOT
    : @DIS_VAR DIS_VAR @ S->F ;
    :  TREK >RAD RAD F@ COS @DIS_VAR F* REAL_X F@ F+ REAL_X F! RAD F@ SIN
@DIS_VAR F* REAL_Y F@ F+ REAL_Y F! ;
    : SET_PNT1 REAL_X F@ F->S MAX_X MOD PNT_X1 ! REAL_Y F@ F->S MAX_Y MOD
PNT_Y1 ! ;
    : SET_PNT2 REAL_X F@ F->S MAX_X MOD PNT_X2 ! REAL_Y F@ F->S MAX_Y MOD
PNT_Y2 ! ;
    : DO_LINE PNT_X1 @ PNT_Y1 @ PNT_X2 @ PNT_Y2 @ LINE ;
    : PLOT SET_PNT1 TREK SET_PNT2 DO_LINE ;
    : ?STOP ?KEY 81 = IF T_MODE ABORT ENDIF ;
    : PUT_DOT PNT_X @ PNT_Y @ DOT ;
    : CENTER MID_X DUP PNT_X ! S->F REAL_X F!  MID_Y  DUP  PNT_Y  !  S->F
REAL_Y F! ;
    0 VAR Y# 6 ALLOT 0 VAR Q# 6 ALLOT 0 VAR Q#+ 6 ALLOT
    : !Y Y# F! ; : @Y Y# F@ ; : @Q Q# F@ ; : !Q Q# F! ; : !Q+ Q#+ F! ;
    : @Q+ Q#+ F@ ;
    : RUN_Y >F 1 @Y F- @Q F* @Y F* !Y ;
    0 VAR MAG 6 ALLOT 0 VAR ITS
    : ?Y< @Y Y_LIM F@ F< ;
    :  PLOT_Y  ITS  @  0  DO RUN_Y ?Y< IF @Y MAG F@ F* >F 190 FMOD >F 190
FSWAP F- REAL_Y F! SET_PNT PUT_DOT ENDIF LOOP ;
    0 VAR Q#1 6 ALLOT 0 VAR PRMR 0 VAR FLAG 8210 CON ABC 0 VAR ROW
    0 VAR COL
    : INIT_AL 2048 ABC 1024 VMBR ;
    : +ROW ROW @ 256 + 6144 MOD ROW ! ;
    : -ROW ROW @ 5888 + 6144 MOD ROW ! ;
    : +COL COL @ 248 = IF 0 COL ! +ROW ELSE 8 COL +! ENDIF ;
    : -COL COL @ 0 > IF -8 COL +! ELSE 31 COL ! -ROW ENDIF ;
    : @R_C ROW @ COL @ 8192 + + ;
    : DISP 0 DO PAD I + C@ 8 * ABC + 8 0 DO DUP I + C@ I @R_C + VSBW LOOP
DROP +COL LOOP ;
    :  V_SCAL  0 ROW ! 0 COL ! PAD !" 185_" 4 DISP 1280 ROW ! 0 COL ! PAD
!" 145_" 4 DISP 2560 ROW ! 0 COL ! PAD !" 105_" 4 DISP 3840 ROW ! 0 COL !
PAD !" 65_" 4 DISP 5120 ROW ! 0 COL ! PAD !" 25_" 4 DISP ;
    : SCALE 240 40 DO I 188 I 9 + 188 LINE 20 +LOOP 250 50 DO I 190 I 9 +
190 LINE 20 +LOOP V_SCAL ;
```

TI-WRITER BANNERS

by Val Mehling

If you're anything like me, you don't really need to print too many banners. After all, they eat up lots of paper and can wear out ribbons in a real hurry. Then there's the time needed to learn how to use the program and, since not all printers are created equal, you won't be sure until you try printing if the program will actually work with your printer. There's got to be an easier way.

If you're using TI-Writer, then you already have the program and you don't have to worry about printer compatibility. The files on this disk are set up to make printing banners a snap. You can keep it simple and just use the letters provided or you can go ahead and create your own letters and/or graphics.

Since you may want to conserve your ribbon, printout density can be controlled very easily. In fact, you can just outline the letters with dots and then use a marker to fill them in. That way you get nice neat looking signs without wearing out your ribbons. This would also be good for test prints.

The first thing you should do is print out the Directory of this disk. Each character is saved in a separate file, all of which begin with "CAP/". What follows that identifies the character. The "." and "," are called DOT and COMA, rspectively. The file "CNTR" is a guide to help you CeNTeR any characters or graphics you may be trying to design. The file "DEMO" is the one that is used to control the actual printout. I'll come back to that later.

If you examine the characters with the TI-Writer Editor, you will see that I have set the margins at 10 and 70. The left margin is the 'bottom line' and the right margin is the 'top line' of the large characters. The smaller characters are between 10 and 30, and between 50 and 70. You will also see that all of the letters are laid on their sides exactly as they will be printed out. I skipped the first line, used the next 11 for the character outline, and then skipped one more for a total of thirteen lines per character. The example below is the letter "A".

```
AAAAAAAAAAAAAAAEEEEEEEEEEEEEEEEEEEEEEEEEIIIIIIIIIIIIIIII
AAAAAAAAAAAAAAAEEEEEEEEEEEEEEEEEEEEEEEEEIIIIIIIIIIIIIIII
BBBBBBBBBBBBBBBFFFFFFFFFFFFFFFFFFFFFFFFJJJJJJJJJJJJJJJII
      DCC      DCCC          HGGG                LKK      JIII
      DCC       DCCC          HGGG               LKK       JIII
      DCC        DCCC          HGGG              LKK        JIII
      DCC         DCCC          HGGG             LKK         JIII
      DCC         DCCC          HGGG             LKK         JIII
AAAAAAAAAAAAAAAAAAAAAEEEEEEEEEEEEEEEEEEEEEIIIIIIIIIIIIIIIIIIII
AAAAAAAAAAAAAAAAAAAAAEEEEEEEEEEEEEEEEEEEEEIIIIIIIIIIIIIIIIIIII
BBBBBBBBBBBBBBBBBBBBFFFFFFFFFFFFFFFFFFFFJJJJJJJJJJJJJJJJJJJJ
```

What's that? It doesn't look like an A? Well, actually it's 3 A's in one. There's the big one that's composed of the letters A, B, E, F, I, J, H and G, the upper one made with I, J, L and K, and the lower one made with A, B, C and D. Each letter of the alphabet, all of the digits from 0 through 9, and the punctuation characters !, ", ', *, +, -, /, :, ;, -, and ? are all done the same way. The basic choices this provides you with are 1) Large letters, 2) Large letters with shadow, or 3 and 4) Small letters on the top or bottom row with shadows (they don't look good without shadow).

So, how does TI-Writer know what to print? If you have a look at the file "TOP+SHDW", you'll see how the Transliterate command works (.TL aaa:bbb). Any number of characters may be called with this command but, for our purposes, the fact that one ASCII Code can be substituted for another is all we need. First, where the aaa is, you put the ASCII Code of the character you are using in the text file, (ex. 65=A). Next, look in your printer manual to see what code you need to print a graphic character. (Your printer may not have these characters but, if it does, they will usually have codes above 128.) Select the code you want to use for the main body of the letter and use that code for text letters A, C, E, G, I and K. The other letters get whatever code you want to use for the shadow part. If you use the same code for both you will simply get thicker letters. You will also see that some letters are set to ASCII Code 32. This is how letters are de-activated.

If you are testing the output, or if you just want to lightly outline the letters and fill them in with a marker (thus saving your ribbon), you can select ASCII codes that will just print small dots. Also, by selecting this kind of character and then adjusting the paper feed by embedding printer control codes in your PRINT file, you can get narrower letters. With TI-Writer there are lots of ways to modify your output.

Now you might want to have a look at DEMO. The top line of DEMO has the code that puts my printer in Emphasised mode. This is folowed by ".PL 20000" which resets the page length so that there won't be any page breaks in the middle of your banner. (If your printer has a "skip perforation" feature, make sure it's been turned off.) The next entry is ".DSK2.LRG+SHDW" . Saving the print codes this way means that switching from one mode to another only requires calling the file.

Next you'll see a whole series of Include File (.IF) entries. Note that the last character of each of these entries spells out "LITI 99'ERS". This is how you control what characters get printed out. If you need more characters, just use the COPY command and duplicate as many lines as you need. Be sure to erase any left overs.

The next entry uses ".DP" to define and number a prompt. In this case it is number 3 and says "MARK PAPER, PRESS <CR>". The 3 on the next line which is surrounded by stars, is what calls the prompt. This is where, if you run the DEMO file, you will see the prompt on the display and you can mark the paper and then press ENTER to continue.

CONT. PAGE 10

CONFIDENTIAL FILE

Guest Columnist: Tony Lewis

A POTENTIAL PERIPHERAL

Speaking of Tony Lewis and Al Beard, we have been conferring for over one year (we're busy folks) on a semi-secret project for a new peripheral for the TI and Geneve. Modern personal computers (IBM, clone, Mac, etc) usually have the capability to utilize a specialized microprocessor called a math coprocessor. A coprocessor will do something much more efficiently than the main processor, and usually much faster too. A math coprocessor is set up to intercept requests to the main processor to perform complex math, perform the math, and tell the main processor what the answer is (much like having a smart friend in school). The main stumbling block is that math coprocessors are usually designed to work only with a certain main processor (ie - the Intel '387 math chip only works with the Intel '386 microprocessor). However, it turns out that the good folks at Motorola designed their math coprocessors, the MC68881 and MC68882 to work in a 'peripheral' mode with just about any microprocessor, as well as a true coprocessor with the 68020 and 68030 micros. After reading the data manual for the 68881, and consulting with the Motorola engineers, I determined that the 68881 could be used with the 9914A or the Geneve. It will take some slightly complicated circuits and software, but overall the 68881 can perform single and double precision mathematics far faster than either the 9900 or 9995 micro could do in assembly alone.

Who would want such a peripheral, why would they want it? Well, serious users who utilize the FORTRAN or C compilers could see a dramatic increase in speed and accuracy of their programs. Graphics based programs, particularly those that are on machines with the V9938 video chip could support faster drawings, since the 68881 could determine the position of the individual bits more easily via various built-in trig. functions. The built-in BASIC/XBASIC could not directly use the math functions; assembly programs would have to be utilized to access the chip.

The cost of the card would possibly be as low as $150, if done as a kit. The majority of the cost would be the 68881 chip, which retails for around $90.

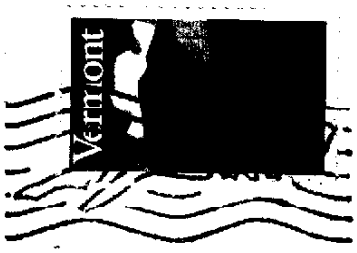
Please note that this is not an 'announcement' of a new product. The facts are that there may only be just one of these ever built. And what we have right now is not completely working right yet, so the whole project may just wind up as a lot of part-time effort to create a non-working peripheral. However, I am curious as to the possible interest in the TI/Geneve world for a math coprocessor peripheral as described above (any interest by others is always a good incentive on cold winter nights to keep plugging away). If you would possible be interested in such a device, please drop me a card or letter to the address below, or leave me a message on Compuserve (73357,1730) or BIX (tonylewis), or contact Al Beard.

Thanks for your support and interest.

Tony Lewis
409 Drolmond Drive
Raleigh, NC 27615

9

-WP♦



FIRST CLASS MAIL

DALLAS TI HOME COMPUTER
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DALLAS, TX
75229 NL EXCHANGE

LONG ISLAND SOUND
THE NEWSLETTER OF THE
LONG ISLAND 99ER'S U. G.

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The next Include File command loads the file TOP+SHDW, and that is followed by the lines which will print COMPUTER. Next there is another Define Promt command which will tell you when to reset the paper in your printer back to the mark that was made earlier. Now the file BTM+SHDW is called and " CLUB" will print out on the bottom row, perfectly aligned with COMPUTER.

The last two lines are very important! Because the Page Length is now over 300 pages, you need to be able to abort the printout when it's finished. This final Define Prompt is used to halt the printer and tell you to press Fct-4. To go back to the Menu, press Fct-9.

That's all there is to it. You can design your own characters or graphics and save each one in an individual file, as I have done, and then include them in any printout. When you come up with a set of Transliterate codes you like, save them with a descriptive name such as I used for LRG+SHDW. Setting up your own PRINT File will be no trouble at all. (Save DEMO for reference.)

When you want to print a banner, you load the Formatter and then select your PRINT File for input. (Or DEMO to try that out.) All of the other files are loaded by the PRINT File and the Formatter does all the work.

Good luck, be well and have fun!